



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,109	04/14/2004	Douglas D. Coolbaugh	BUR920030083US1	3108
23389	7590	04/23/2007		EXAMINER
SCULLY SCOTT MURPHY & PRESSER, PC				FULK, STEVEN J
400 GARDEN CITY PLAZA				
SUITE 300			ART UNIT	PAPER NUMBER
GARDEN CITY, NY 11530				2891

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

7H

Office Action Summary	Application No.	Applicant(s)	
	10/709,109	COOLBAUGH ET AL.	
	Examiner	Art Unit	
	Steven J. Fulk	2891	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 02 January 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-12 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 19-22 is/are allowed.
- 6) Claim(s) 1 and 6-12 is/are rejected.
- 7) Claim(s) 2-5 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 06 May 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date: _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 2, 2007 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 6-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Petit '264.

Regarding claims 1, 6 and 7, Petit discloses a method of forming a precision resistor on a semiconductor substrate (col. 3, lines 29-65; col. 4, lines 5-9) comprising forming a first resistor comprising a calibration structure (fig. 3, R1; col. 7, lines 22-24; col. 4, lines 42-50; the first resistor R1 is measured and compared to a target value, consistent with Applicant's definition of calibration structure) in a first region of a semiconductor substrate; forming a plurality of second resistors (fig. 3, R1-1 - R1-8) in a second region of the substrate, the plurality of second resistors comprising individual resistors, the individual resistors ranging in value

about a desired value; measuring the value of the first resistor (col. 7, lines 22-24); comparing the measured value to a target value (col. 4, lines 42-50); and selecting at least one of the individual second resistors corresponding to the result of the comparison to provide a precision resistor comprised of at least one selected individual second element (read as the precision element comprises the individual second resistor element, as well as the first resistor element) that has the target value (col. 7, lines 16-27).

Regarding claims 8 and 9, the reference discloses the plurality of second resistors comprises three resistors arranged in parallel to each other (fig. 3, R1-1 – R1-4; col. 3, lines 29-32).

Regarding claim 10, the reference discloses the plurality of second resistors to be linked by fusible links (col. 3, line 66 – col. 4, line 4).

Regarding claim 11, the reference discloses the comparing to be performed electronically (col. 7, line 61 – col. 8, line 13; test program compares measured value to target value).

Regarding claim 12, the reference discloses the selecting to include a step of removing other second resistors that are not selected by blowing fusible links or by fusing antifuses that are present within the plurality of second resistors (col. 8, lines 14-36).

Response to Arguments

4. Applicant's arguments with respect to the rejection of claim 1 under 35 U.S.C. 102(b) as being anticipated by Petit '264 have been fully considered but they are not persuasive.

Applicant argues that Petit does not disclose a first element comprising a calibration structure. This argument is not found persuasive because the resistance of the first resistor R1 is measured and compared to a target value, which is consistent with Applicant's definition of a calibration structure (fig. 3, R1; col. 7, lines 22-24; col. 4, lines 42-50).

Applicant also argues that Petit does not anticipated the claimed invention because the claimed invention is a precision element comprised of one of the selected second elements, and Petit's precision element is the first resistor and a second trimmed resistor. This argument is not persuasive because the language of claim 1 is written broadly enough to be anticipated by a precision element comprised of a first resistor and a second resistor. The term "comprised of" is an open-ended term and can include elements in addition to the individual second element (MPEP § 2111.03, Transitional Phrases).

Allowable Subject Matter

5. Claims 2-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 19-22 are allowed.

7. The following is an examiner's statement of reasons for allowance: a search of the prior art failed to disclose or reasonably suggest a method of forming a precision element on a semiconductor substrate comprising forming a first calibration structure element, forming a plurality of second elements ranging in value about a desired value, measuring the value of the first element, comparing

the measured value to a target value, and selecting at least one of the second elements to provide a precision element, wherein plurality of second elements comprise one element having a nominal value about equal to the desired value, another element having a value of about 10% less than the desired value, and a further element having a nominal value of about 10% greater than the value of the desired element, as recited in claims 2 and 19.

Petit '264, Birkner '136, Van Den Broek et al. '116, King '528, Naumov et al. '950, Audy '019, Dale '478, Ohata et al. '148 and Imamura et al. '966 disclose a method of forming a precision resistor wherein a first main resistor is formed, the resistance value of the main resistor is measured, and additional second resistors are connected/disconnected as needed to trim the main resistor to a desired value, but the references do not teach the second resistors themselves to have the nominal value (or +/- 10% of the nominal value) of the desired resistance, to thereby achieve a precision resistor having the desired value using the second element and not incorporating the first main resistor.

8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven J. Fulk whose telephone number is (571)

Art Unit: 2891

272-8323. The examiner can normally be reached on Monday through Friday, 9:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Baumeister can be reached on (571) 272-1722. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SJF

Steven J. Fulk
Patent Examiner
Art Unit 2891

April 13, 2007



B. WILLIAM BAUMEISTER
SUPPLYING PATENT EXAMINER
TECHNOLOGY CENTER 2800